Rotational Restrictions of Selected Herbicides Used in PNW Cereal Production

Editor's Note: As NW growers move towards more intensive crop rotations with direct seeding / conservation tillage systems, the selection and management of soil-active herbicide becomes an increasingly important issue. This summary of crop rotational restriction of selected herbicides was developed by Traci Rauch, University of Idaho Weed Research Support Scientist, and Donn Thill, UI Professor of Weed Science, and published January 22, 2003. This information is based on federal labels located at the Crop Protection Reference website (http://www.greenbook.net). Labels are updated continuously so always read and follow the most current version of the manufacturer's label. All rates listed as product/A (acre).

Herbicide		Plantback restrictions				Primary degradation[2]
Trade name(s)	Common name[1]					
Ally	metsulfuron (2)	Idaho - Statewide - 1/10 oz/A				Low pH - chemical hydrolysis, microbial High pH - microbial
		Pea, lentil, canola	pH 6.8 or lower	18 in cum precip[3]	10 months	
		Pea	pH 6.9 to 7.9	18 in cum precip	15 months	
		Lentil	pH 6.9 to 7.9	18 in cum precip	34 months	
		Canola	pH 6.9 to 7.9	18 in cum precip	22 months	
		if different pH or higher rate		28 in cum precip	34 months	
		Mustard, chickpea			Field bioassay	
Amber	triasulfuron (2)	Barley	pH 6.9 or lower		6 months	
		Barley	pH 7.0 or higher		18 months	
		Lentil, pea, canola, mustard, chickpea			Field bioassay	
Beacon	primisulfuron (2)	Winter wheat			3 months	
		Pea, spring wheat, spring barley			8 months	
		Lentil, canola, mustard, chickpea			18 months	
Express	tribenuron (2)	Lentil, pea, mustard, chickpea			45 days	
		Canola			60 days	
Glean	chlorsulfuron (2)	Northern Idaho -1/6 to 1/3 oz/A				
		Pea	pH 6.5 or lower	35 in cum precip	24 months	
		Lentil	pH 6.5 or lower	50 in cum precip	36 months	
		Canola, mustard, chickpea or pH above 6.5			Field bioassay	
Harmony GT	thifensulfuron (2)	Pea, lentil, canola, mustard, chickpea			45 days	
Harmony Extra	thifensulfuron, tribenuron (2)	Lentil, pea, mustard, chickpea			45 days	
		Canola			60 days	
Maverick	sulfosulfuron (2)	Barley, canola, lentil	pH 7.5 or lower	24 in cum precip	22 months	
		Pea, chickpea	pH 6.5 or higher	24 in cum precip	22 months	
		Pea, chickpea	pH 6.5 or lower	30 in cum precip	17 months	
		Mustard or pH different than listed			Field bioassay	

Herbicide		Plantback restrictions	Primary degradation
Trade name(s)	**Common name**		
Muster	ethametsulfuron (2)	Winter wheat, chickpea — 22 months (w/ field bioassay) Spring wheat, barley — 10 months Canola, lentil, pea, mustard — 22 months	Low pH - chemical hydrolysis, microbial High pH - microbial
Peak	prosulfuron (2)	PNW- pH 7.2 or lower and 0.5 oz/A Pea — Apply before July 1 — 10 months Chickpea — Apply before June 15 — 10 months Canola, lentil — Apply before June 15 and 6 in of cum precip in 6 months after application and soil is tilled min 4 in deep before planting — 10 months Mustard 18 months All other rates, pH above 7.2 — Field bioassay	
Everest	flucarbazone-sodium (2)	Barley, canola, pea — 11 months Lentil, mustard — 24 months	Microbial
Olympus	propropcarbazone (2)	Registration pending	
Assert	imazamethabenz (2)	Pea, lentil, canola, mustard, chickpea — 15 months	Microbial Greater persistence w/ low pH, high organic matter
Beyond	imazamox (2)	Wheat (non - Clearfield) — 3 months Barley — pH greater than 6.2 AND 18 in cum precip — 9 months Barley — pH less than 6.2 OR 18 in cum precip — 9 months w/ plowing Barley — pH less than 6.2 OR 18 in cum precip — 18 months w/o plowing Mustard, chickpea — 18 months Canola (non - Clearfield) — 26 months	
Pursuit	imazethapyr (2)	Wheat — 4 months Barley — 9.5 months Canola, mustard — 40 months	
Treflan	trifluralin (3)	Grass seed — 18 months after spring application Grass seed — 20 months after fall application	Microbial Some photo degradation absorbs tightly to organic matter
Prowl	pendimethalin (3)	Winter wheat — less than 4.8 pt/A — 4 months Winter wheat — 4.8 pt/A or greater — 16 months	

Herbicide		Plantback restrictions		Primary degradation
Trade name(s)	**Common name**			
Clarity, Banvel	dicamba (4)	West of Mississippi River	24/oz A or less	Microbial
		(do not count days when ground is frozen)		
		All crops	120 days	
		wheat, barley	15 days per 8 oz/A	
			24 to 64 oz/A	
		All crops	30 in cum precip or greater — 120 days	
		All crops	less than 30 in cum precip — 180 days	
		wheat, barley	45 days per 16 oz/A	
Stinger	clopyralid (4)	Idaho		
		Mustard, canola[4]	12 months	
		Pea, lentil, chickpea	12/18 months[5]	
Curtail	clopyralid, 2,4-D (4)	Idaho		
		Mustard, canola	12 months	
		Pea, lentil, chickpea	18 months	
Starane	fluroxypyr (4)	Pea, lentil, canola, mustard, chickpea	120 days	
Sencor	metribuzin (5)	Wheat, barley (following spring application)	4 months	Microbial
		All crops (fall fallow application)	10 months	
		Canola, mustard	12 months	
Define[6]	flufenacet (15)	Wheat, pea, lentil, canola, mustard, chickpea	12 months	Microbial
Paramount	quinclorac (4, 27)	Winter or spring wheat	immediately	Microbial
		Barley, canola, mustard, chickpea	10 months	
		Pea, lentil	24 months	

[1]Number in parentheses is the WSSA group number. Herbicides with the same number kill weeds in a similar manner

[2]Microbial degradation is slowed by cool temperature and dry conditions; chemical hydrolysis decreases with increasing soil pH

[3]Cum precip = cumulative preciptation (after application until planting)

[4]Stinger had a Section 18 in 2002 for control of Canada thistle in canola

[5]18 months if risk of injury is unacceptable

[6]Flufenacet + metribuzin = Axiom